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EXAMINER				
GEBREMICHAEL, BRUK A				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/593,686

Applicant(s)

PAECH ET AL.

Examiner

BRUK A. GEBREMICHAEL

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Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 May 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-10,12,13 and 15-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/888)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. The following office action is a **Final Office Action** in response to communications received on 05/09/2008. Claims 1-2, 4-10, 12-13, 15-16, 19, and 21 have been amended. Claims 3, 11, and 14 have been cancelled. New claims 22-25 have been added.

Response to Amendment

2. The Examiner respectfully withdraws the objection set forth in the previous office action with regard to the abstract.

Applicant's amendment to claims 1, 15 and 17 is sufficient to overcome the 35 U.S.C 102 rejection set forth in the previous office action regarding claims 1-16. The Examiner respectfully withdraws the 35 U.S.C 102 rejections.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 7, 16, 19-21 and 25 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 7, 16, 19 and 21 recites the claimed limitation "unique vowel number". However, this claimed feature is not described in the specification. The specification

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appears to disclose *unique vowel sound numbers*, but no description is given with regard to the claimed feature *unique vowel number*.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 7 recites the limitation " the unique vowel number" in line 2 of this claim. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

- Claims 1-2, 4-9, 12-13, 15-16, 22, and 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rai 6,077,080 in view of Sprague 4,768,959.

Regarding claim 1, Rai discloses the following claimed limitations, a method of encoding words for language teaching comprising the steps of identifying a plurality of different vowel sounds each based on one or more vowels representing each of the plurality of different vowel sounds by a vowel sound number corresponding to the

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particular one of the plurality of different vowel sounds (FIG 1, Rows 1-5), representing the plurality of different vowel sounds by one or more vowel colors (col.2, lines 61-65), storing the vowel sound numbers and one or more vowel colors for the plurality of different vowel sounds (see FIG 1, Row 2), identifying a plurality of different consonant sounds (col.4, lines 14-19), representing each of the plurality of consonant sounds by a consonant color that is different from the one or more vowel colors (col.4, lines 14-20), storing the consonant color for the plurality of consonant sounds (FIG 2), identifying a plurality of different silent letters occurring in words, representing each silent letter by a silent color that is different from the consonant color and the one or more vowel colors (col.6, lines 16-22), storing the silent color for the plurality of different silent letters (FIG 6), whereby a word is represented by a combination of elements including elements selected from the group consisting of a vowel sound number, a vowel color, the consonant color, the silent color, and any combinations thereof (col.6, lines 48-53).

However, Rai does not positively teach, representing each of the plurality of different vowel sounds by a unique vowel sound number.

Sprague discloses a method of teaching language through the use of a periodic code of language elements that teaches and suggests the limitation, representing each of the plurality of different vowel sounds by a unique vowel sound number (col.4, lines 55-58 and also see FIGs 1 and 7).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the invention of Rai in view of Sprague by

incorporating distinct numerals for each language elements and organizing these language elements and their distinct numeral and symbolic representations in a periodic table in order to allow students to pronounce new words and sentences based on their familiarity with the symbol and sound presented on the periodic table of the language elements.

Note that representing the different vowel sounds by a vowel sound number is old and well known in the art. For instance, the Donald's invention (US 3,485,951) also teaches this limitation. For example the line, "There are, of course, many other applications for the speech recognizing circuit of the invention. For example, it could be employed to actuate an adding machine verbally by assigning a number to each vowel sound." (col.3, lines 69-72).

Here, even if Donald's invention taught this idea with regard to speech recognizing circuit, the claimed feature of the current invention (i.e. representing the plurality of different vowel sounds by a unique vowel sound number) has already been suggested.

Rai in view of Sprague teaches the claimed limitations as discussed above. Rai further teaches,

Regarding claim 2, one or more of the plurality of different consonant sounds comprises a constant diagram (FIG 3),

Regarding claim 4, each of the plurality of different vowel sounds is represented by a different vowel color (col.8, lines 39-42),

Regarding claim 5, each of the plurality of different vowel sounds is represented by the same vowel color (col.3, lines 17-26),

Regarding claim 6, the representation of the word includes one or more vowel letters corresponding to each of the vowel sounds in the word, the one or more vowel letters for each vowel sound having a corresponding one of the one or more vowel colors (col.2, lines 66-67 and col.3, lines 1-3),

Regarding claim 7, the representation of the word further includes the unique vowel number for each vowel sound in the word having the same one of the one or more vowel colors as the corresponding one or more vowel letters (see FIG 1, Row 1),

Regarding claim 8, identifying a plurality of different consonant sounds includes identifying one or more consonant diagraphs and further representing each of the one or more consonant diagraphs by an under score located underneath the consonant diagraph (col.4, lines 20-34 and FIG 2),

Regarding claim 9, identifying a plurality of different consonant sounds includes identifying one or more letters that have a consonant sound that is different than a default sound for the one or more letters and further representing the consonant sound that is different than a default sound by a symbol (col.4, lines 20-26),

Regarding claim 12, each of one or more of the letters of a word are represented as having the corresponding vowel color, consonant color, or silent color by which the sound for the one or more letter is represented (see FIG 3),

Regarding claim 13, the identifying a plurality of different consonant sounds includes identifying one or more groups of consonant sounds and representing each of

the one or more groups of consonant sounds by a notation indicative of the pronunciation of the group of consonant sounds (FIG 2 and col.4, lines 20-28).

Regarding claim 15, Rai discloses the following claimed limitations, a system for teaching a language comprising a database (col.7, lines 57-63) which stores, a plurality of different vowel sounds, with each of the plurality of vowel sounds and corresponding one or more letters represented by a vowel sound number and the plurality of different vowel sounds having one or more vowel colors (see FIG 1, Rows 1-5 and col.2, lines 61-65), a plurality of different consonant sounds, with each of the plurality of different consonant sounds represented by consonant color that is different than the one or more vowel colors (col.4, lines 14-20), a plurality of different silent letters occurring in words, with each of the plurality of silent letters represented by a silent color that is different than the one or more vowel colors and the consonant color and a plurality of different words (col.6, lines 16-22), a conversion means which converts each word into a converted form comprising the corresponding vowel sound number, one or more vowel colors, consonant color and silent color (col.7, lines 42-49) and a display means which displays a word in converted form, and wherein the conversion means is adapted to convert a word input into the system and utilize the display means to display the word in converted form (col.7, lines 35-40 and FIG 13).

However, here also, Rai does not positively teach, representing each of the plurality of different vowel sounds by a unique vowel sound number.

Sprague discloses a method of teaching language through the use of a periodic code of language elements that teaches and suggests the limitation, representing each

of the plurality of different vowel sounds by a unique vowel sound number (col.4, lines 55-58 and also see FIGs 1 and 7).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the invention of Rai in view of Sprague by incorporating distinct numerals for each language elements and organizing these language elements and their distinct numeral and symbolic representations in a periodic table in order to allow students to pronounce new words and sentences based on their familiarity with the symbol and sound presented on the periodic table of the language elements.

As already indicated above, representing the different vowel sounds by a vowel sound number is old and well known in the art. For instance, the Donald's invention (US 3,485,951) also teaches this limitation. For example the line, "There are, of course, many other applications for the speech recognizing circuit of the invention. For example, it could be employed to actuate an adding machine verbally by assigning a number to each vowel sound." (see col.3, lines 69-72).

Similarly, even if Donald's invention taught this idea with regard to speech recognizing circuit, the claimed feature of the current invention (i.e. representing the plurality of different vowel sounds by a unique vowel sound number) has already been suggested.

Regarding claim 16, Rai teaches the following claimed limitations, a method of displaying words for language teaching, comprising the steps of identifying a word, encoding the word into a plurality of indicia components and displaying the encoded

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word comprising indicia components (col.1, lines 62-65 and col.6, lines 55-62), wherein the plurality of indicia comprise a number for each of different vowel sound and one or more vowel colors for vowel sounds and their composing letters (FIG 1 and col.1, lines 56-65), a consonant color representing consonant sounds, a consonant symbol representing each of a selection of consonant sounds resulting from a combination of at least two letters (col.4, lines 13-20), and silent color representing silent letters occurring in words (col.6, lines 16-22).

However, Rai does not positively teach, a plurality of indicia comprising a unique vowel number for each different vowel sound.

Sprague discloses a method of teaching language through the use of a periodic code of language elements that suggests the limitation, a plurality of indicia comprising a unique vowel number for each different vowel sound (see FIGs 1 and 7).

Therefore, as it has already been indicated, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the invention of Rai in view of Sprague by incorporating distinct numerals for each language elements and organizing these language elements and their distinct numeral and symbolic representations in a periodic table in order to allow students to pronounce new words and sentences based on their familiarity with the symbol and sound presented on the periodic table of the language elements.

Rai in view of Sprague teaches the claimed limitations as discussed above. Rai further teaches,

Regarding claim 22, a step of representing different strengths of one or more select vowel sounds of the plurality of different vowel sounds in one or more words by different levels of brightness or boldness of the vowel color corresponding to the select vowel sound (col.1, lines 38-44),

Regarding claim 24, each of the plurality of vowel sounds are represented by the same vowel color (col.3, lines 17 and 26),

Regarding claim 25, the one or more vowel colors is the same color for all of the different vowel sounds (col.3, lines 17-26).

- Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rai 6,077,080 in view of Sprague 4,768,959 and further in view of Stocker 4,713,008.

Regarding claim 10, Rai in view of Sprague teaches the claimed limitations as discussed above.

However, Rai in view of Sprague does not explicitly teach, the symbol is represented as a superscript to the corresponding one or more letters.

Stocker discloses a method and means for teaching a set of sound symbols that teaches the limitations, a symbol is represented as a superscript to the corresponding one or more letters (FIG 42, label 7 and col.11, lines 4-18).

Therefore, as it has already been indicated, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the invention of Rai in view of Sprague and further in view of Stocker by including additional symbols to identify a word with a constant diagram in order to help the student to pronounce the word without difficulty thereby facilitating the learning process.

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- Claims 17-18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rai 6,077,080 in view of Sprague 4,768,959 and further in view of McGinley 4,030,211.

Regarding claims 17 and 18, Rai in view of Sprague teaches the claimed limitations as discussed above.

However, Rai in view of Sprague does not teach, displaying a matrix with sounds of one type along one axis and sounds of another type along another, and displaying a composite of sounds from each axis by a zone corresponding to a point of intersection of the sounds on the grid.

McGinley teaches, displaying a matrix with sounds of one type along one axis and sounds of another type along another (col.4, lines 29-40), and displaying a composite of sounds from each axis by a zone corresponding to a point of intersection of the sounds on the grid (see FIG 1, label 16 and also col.3, lines 48-56).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the invention of Rai in view of Sprague and further in view of McGinley by including a rectangular grid in Rai's invention in order to enable the user to immediately focus on a word which is sounded by the consonant and vowel sound at the end of the respective line and column, as taught by McGinley (col.4, lines 40-43).

Regarding claim 20, Rai in view of Sprague teaches the claimed limitations as discussed above.

Rai in view of Sprague does not teach, displaying a matrix with sounds of one type along one axis and sounds of another type along another.

McGinley teaches, displaying a matrix with sounds of one type along one axis and sounds of another type along another (col.4, lines 29-40).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the invention of Rai in view of Sprague and further in view of McGinley by including a rectangular grid in the invention in order to enable the user to immediately focus on a word which is sounded by the consonant and vowel sound at the end of the respective line and column, as taught by McGinley (col.4, lines 40-43).

- Claims 19, 21 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rai 6,077,080 in view of Sprague 4,768,959 and further in view of Patton 2005/0032027.

Regarding claims 19 and 21, Rai in view of Sprague teaches the claimed limitations as discussed above.

However, Rai in view of Sprague does not positively teach, the step of searching for words including at least one of unique vowel number, a vowel color, a consonant color, a silent color, a vowel sound, a consonant, a consonant diagraphs, a silent letter.

Patton teaches, the step of searching for words including at least one of unique vowel number, a vowel color, a consonant color, a silent color, a vowel sound, a consonant, a consonant diagraphs, a silent letter (see Abstract and also para.0010, lines 10-16).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the invention of Rai in view of Sprague and further in view Patton by incorporating a searching module in order to easily search and identify the words that are in a given text and convert the texts in to their color coded form thereby allowing the user to recognize their representations.

Regarding claim 23, Rai in view of Sprague teaches the claimed limitations as discussed above.

However, Rai in view of Sprague does not positively teach, a step of representing different strength consonant sounds in one or more words by different levels of brightness or boldness of the consonant color.

Patton teaches, a step of representing different strength consonant sounds in one or more words by different levels of brightness or boldness of the color (Para.0028, lines 18).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the invention of Rai in view of Sprague and further in view Patton by varying the intensity of the color of the letter representing the consonant sound in order to help the student to identify the consonant sounds that have two or more options.

Here, even if Patton teaches this claimed limitation using different colors, it has been held that when the general condition of the claimed subject matter (i.e. varying the brightness or darkness of the color of the letter representing the consonant sound) is disclosed in the prior art, specifying a particular color for a particular sound is a pure

design choice, and therefore this does not distinguish the current invention from the prior art.

Response to Arguments.

5. Applicant's arguments filed on 05/09/2008 have been fully considered. In the remarks, Applicant indicated that,

(1) In the interview, the subject matter of the claims that are currently pending in the application was discussed in relation to the rejections set forth in the current Office Action. These rejections are based on U.S. Patent Application No. 6,077,080 to Rai ("the Rai patent"). Examiner Gebremichael and Primary Examiner Mosser agreed with Applicants' position that the Rai patent did not disclose the subject matter of the claims pending in this application.

- In response to argument (1), as already pointed out in the previous office action, the Rai's patent discloses the claimed features of claims 1-16 as originally filled. However, the Applicant has amended the claims as indicated above, and the amendment made to the claims overcomes the 35 U.S.C. 102(b) claims rejection set forth in the previous office action over the Rai's patent. Regarding the status of the currently amended claims, please refer to the above section (*Claim Rejections - 35 USC § 103*).

Conclusion

Applicant's amendment necessitated the new grounds of rejection presented in this final office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP §

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706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bruk A. Gebremichael whose telephone number is (571)270-3079. The examiner can normally be reached on Monday to Friday (7:30AM-5:00PM) ALT. Friday OFF.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, THAI XUAN can be reached on (571) 272-7147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Bruk A Gebremichael/
Examiner, Art Unit 3714

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